



P.B. 5618 - Patentlaan 2  
2280 HV Rijswijk (ZH)  
☎ (070) 340 2040  
Tx 31651 epo nl  
FAX (070) 340 3018

Europäisches  
Patentamt  
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La Haye  
Division de la  
recherche

Chapman, Paul William  
Kilburn & Strode,  
20 Red Lion Street  
London WC1R 4PJ  
GRANDE BRETAGNE

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Anmeldung Nr./Application No./Demande n°//Patent Nr./Patent No./Brevet n°

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Anmelder/Applicant/Demandeur//Patentinhaber/Proprietor/Titulaire  
Tosoh Corporation

## COMMUNICATION

The European Patent Office herewith transmits the partial European search report under Rule 46(1) EPC relating to the above-mentioned European patent application.

Copies of the documents cited in the search report are enclosed.

The applicant's attention is drawn to the following:

The search Division informs the applicant that if the European search report is also to cover inventions other than the invention first mentioned in the claims, a further search fee must be paid for each of these inventions, within ONE MONTH after notification of this communication.

If the application has been filed up to 30 June 1999, the search fee in force before 01 July 1999 (EUR 869.--) or the equivalent applicable on the date of payment is payable.

**This applies also to the search fees requested under Rule 46(1) EPC:**  
See also OJ EPO 06/1999, 405.

- ☐ The abstract was modified by the Search Division and the definitive text is attached to the present communication.
- ☐ Additional set(s) of copies of the documents cited in the European search report is (are) enclosed as well.



### Note to users of the automatic debiting procedure:

Unless the EPO receives prior instructions to the contrary, the search fee(s) will be debited on the last day of the period for payment. For further details see the Arrangements for the automatic debiting procedure, Supplement to OJ EPO 02/1999.

REGISTERED LETTER



Eur pean Patent  
Office

# PARTIAL EUROPEAN SEARCH REPORT

Application Number

under Rule 46, paragraph 1 of the European Patent Convention EP 01 30 9779

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	WO 96 36707 A (MULLER HANS MICHAEL ;BROMURO CARLA (IT); UNIV ROMA (IT); VALLE ROB) 21 November 1996 (1996-11-21) * page 13, line 30 - page 14, line 2 *	2-4	C12Q1/70 C12N15/40 C12Q1/68
X	JIANG X ET AL: "NORWALK VIRUS GENOME CLONING AND CHARACTERIZATION" SCIENCE (WASHINGTON D C), vol. 250, no. 4987, 1990, pages 1580-1583, XP001153539 ISSN: 0036-8075	1	
Y	* the whole document *	10	
X	VINJE J ET AL: "Genetic polymorphism across regions of the three open reading frames of "Norwalk-like viruses". ARCHIVES OF VIROLOGY, vol. 145, no. 2, 2000, pages 223-241, XP002247148 ISSN: 0304-8608	5,6	
Y	* page 224, line 2,3 * * page 228; table 2 *	7-10	TECHNICAL FIELDS SEARCHED (Int.Cl.7)  C12Q
-/--			
<b>LACK OF UNITY OF INVENTION</b>			
<p>The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:</p> <p>see sheet B</p> <p>The present partial European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims.</p>			
Place of search <b>MUNICH</b>		Date of completion of the search <b>8 August 2003</b>	Examiner <b>Helliot, B</b>
<b>CATEGORY OF CITED DOCUMENTS</b> X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	



European Patent  
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# PARTIAL EUROPEAN SEARCH REPORT

Application Number  
EP 01 30 9779

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
Y	KIEVITS T ET AL: "NASBA TM ISOTHERMAL ENZYMATIC IN VITRO NUCLEIC ACID AMPLIFICATION OPTIMIZED FOR THE DIAGNOSIS OF HIV-1 INFECTION" JOURNAL OF VIROLOGICAL METHODS, AMSTERDAM, NL, vol. 35, no. 3, 1 December 1991 (1991-12-01), pages 273-286, XP000576430 ISSN: 0166-0934 * page 273, line 14-16 *	7	
Y	ISHIGURO ET AL: "Flourescence detection of specific sequence of nucleic acids by oxazole yellow-linked oligonucleotides. Homogenous quantitative monitoring of in vitro transcription" NUCLEIC ACIDS RESEARCH, OXFORD UNIVERSITY PRESS, SURREY, GB, vol. 24, no. 24, 1996, pages 4992-4997, XP002093536 ISSN: 0305-1048 * the whole document *	8,9	TECHNICAL FIELDS SEARCHED (Int.Cl.7)



European Patent  
Office

LACK OF UNITY OF INVENTION  
SHEET B

Application Number

EP 01 30 9779

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims: 1 (completely), 2-6 (partially), 7-10 (completely)

A cDNA as shown in SEQ. ID. No.1, or a fragment or a derivative thereof having a size sufficient to bind to Genogroup II (GII) type Small Round Structured Virus (SRSV). An oligonucleotide for detection of GII type SRSV, which oligonucleotide is capable of binding to said GII type SRSV at specific site, and comprises at least 10 contiguous bases of the sequences listed as SEQ. ID. Nos.2.

A GII type SRSV RNA amplification process in which a specific sequence of said GII type SRSV RNA present in a sample is used as a template for synthesis of a cDNA employing an RNA-dependent DNA polymerase, the RNA of the formed RNA/DNA hybrid is decomposed by Ribonuclease H to produce a single-stranded DNA, said single-stranded DNA is then used as a template for production of a double-stranded DNA having a promoter sequence capable of transcribing RNA comprising said specific sequence or the sequence complementary to said specific sequence employing a DNA-dependent DNA polymerase, said double-stranded DNA produces an RNA transcription product in the presence of an RNA polymerase, and said RNA transcription product is then used as a template for cDNA synthesis employing said RNA-dependent DNA polymerase, wherein said RNA amplification process being characterized by employing a first primer comprising at least 10 contiguous bases of any of the sequences listed as SEQ. ID. No.20 to No.24 which has a sequence homologous to a portion of said GII type SRSV RNA to be amplified, and a second primer comprising at least 10 contiguous bases of any of the sequences listed as SEQ. ID. No.25 to No.31, which has a sequence complementary to a portion of said GII type SRSV RNA sequence to be amplified, where either or both the first and second primers include the RNA polymerase promoter sequence at their 5' end.

2. Claims: 2-6 (partially)

An oligonucleotide for detection of GII type SRSV, which oligonucleotide is capable of binding to said GII type SRSV at specific site, and comprises at least 10 contiguous bases of the sequences listed as SEQ. ID. Nos.3.

3. Claims: 2-6 (partially)

An oligonucleotide for detection of GII type SRSV, which oligonucleotide is capable of binding to said GII type SRSV at specific site, and comprises at least 10 contiguous bases of the sequences listed as SEQ. ID. Nos.4.



European Patent  
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**LACK OF UNITY OF INVENTION**  
**SHEET B**

Application Number  
EP 01 30 9779

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

**4. Claims: 2-6 (partially)**

An oligonucleotide for detection of GII type SRSV, which oligonucleotide is capable of binding to said GII type SRSV at specific site, and comprises at least 10 contiguous bases of the sequences listed as SEQ. ID. Nos.5.

**5. Claims: 2-6 (partially)**

An oligonucleotide for detection of GII type SRSV, which oligonucleotide is capable of binding to said GII type SRSV at specific site, and comprises at least 10 contiguous bases of the sequences listed as SEQ. ID. Nos.6.

**6. Claims: 2-6 (partially)**

An oligonucleotide for detection of GII type SRSV, which oligonucleotide is capable of binding to said GII type SRSV at specific site, and comprises at least 10 contiguous bases of the sequences listed as SEQ. ID. Nos.7.

**7. Claims: 2-6 (partially)**

An oligonucleotide for detection of GII type SRSV, which oligonucleotide is capable of binding to said GII type SRSV at specific site, and comprises at least 10 contiguous bases of the sequences listed as SEQ. ID. Nos.8.

**8. Claims: 2-6 (partially)**

An oligonucleotide for detection of GII type SRSV, which oligonucleotide is capable of binding to said GII type SRSV at specific site, and comprises at least 10 contiguous bases of the sequences listed as SEQ. ID. Nos.9.

The common concept which could link inventions 1-8, as required by R. 30 EPC, can be seen in the provision of an oligonucleotide for detection of GII type SRSV. However, this concept is known from document D2 (Vinjé et al, 2000).

Document D2, which is considered as the closest prior art, investigates genomic relationships among Norwalk-like human caliciviruses (NLV), also known as small round-structured viruses, wherein specific primers for amplification of genogroup II of NLVs are designed (Tab. 2, p. 228).

Thus, the technical problem to be solved by the present application may be regarded as providing alternative oligonucleotides to those of D2. In view of the absence of any structural feature linking the different oligonucleotides, each of the group of oligonucleotides to which the application relates provides a separate solution to this problem. The description mentions that the claimed primers are suitable for



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**LACK OF UNITY OF INVENTION  
SHEET B**

Application Number  
**EP 01 30 9779**

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

isothermal amplification reactions (p. 5, l. 10-20 of the present application). However, isothermal amplification methods are well known as well as primers for performing them (see Kievits T. et al, 1991). The selection of appropriate primers for performing an isothermal amplification reactions of a given target is thus a routine task for the skilled person.

Hence, the mere provision of a group of primers suitable for amplifying a specific target by isothermal amplification techniques cannot, as such, represent the special technical feature as defined in R. 30 EPC.

Thus, the aforelisted inventions are no longer linked by a special technical feature as required by Rule 30 EPC. The requirements for unity of invention referred to in Article 82 EPC are, thus, not fulfilled.

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 01 30 9779

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

08-08-2003

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9636707 A	21-11-1996	IT 5777696 A	18-11-1996
		AU 0826040 A1	29-11-1996
		EP 9636707 A1	04-03-1998
		WO 9636707 A1	21-11-1996